BookletChart™

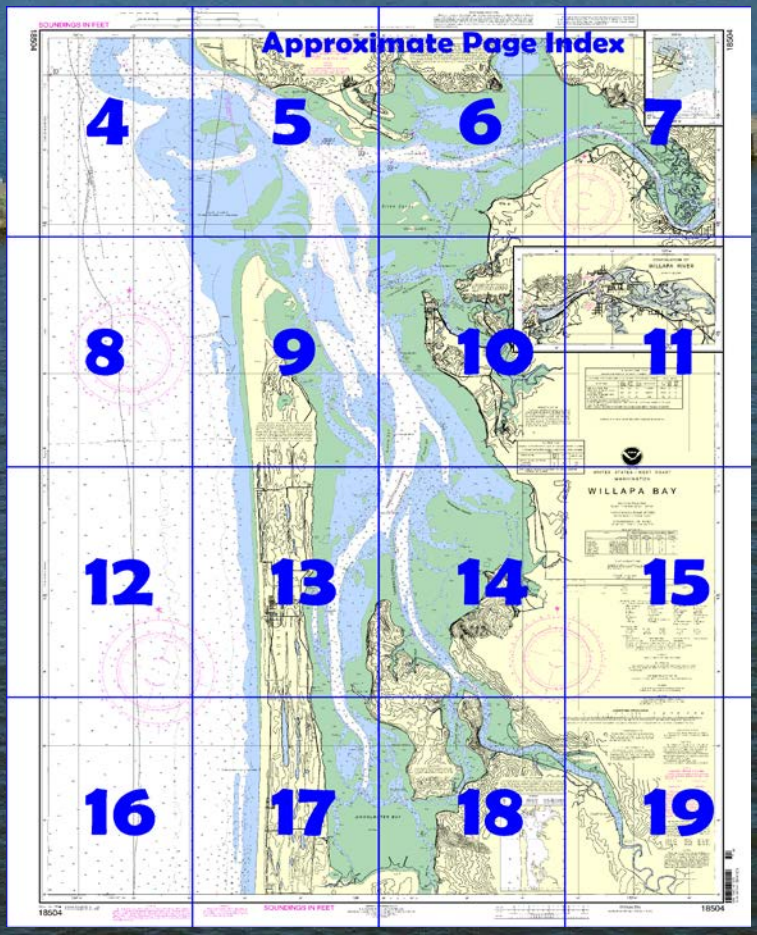
Willapa Bay

NOAA Chart 18504

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.

- *Complete, reduced-scale nautical chart*
- *Print at home for free*
- *Convenient size*
- *Up-to-date with Notices to Mariners*
- *Compiled by NOAA's Office of Coast Survey, the nation's chartmaker*



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

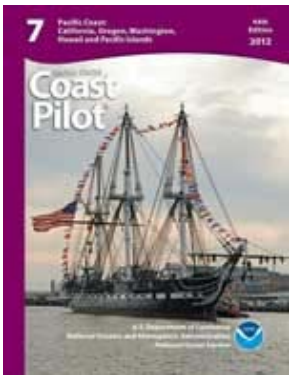
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=18504.



(Selected Excerpts from Coast Pilot)
Willapa Bay entrance is 24 miles N of the Columbia River entrance. The bay is used primarily by fishing and oyster boats.
The entrance is in the N part of the bay, which consists of two arms; the S, 18 miles long, and the E, 10 miles long. Both arms are filled with extensive shoals, large areas of which bare at low water. The S arm is separated from the ocean by a strip of low sand and sand dunes, averaging 1.5 miles in width and covered with trees until within 2.2 miles of Leadbetter Point. Numerous cottages and summer resorts are along the seaward face of the narrow peninsula. The shore of the bay elsewhere is composed of low, rolling hills, 100 to 200 feet high, covered with dense growths of timber.
Willapa Bar extends about 3 miles outside of a line joining Cape Shoalwater and Leadbetter Point. The bar channel is continually shifting, and depths over it vary from season to season. Because of the frequent changes in the position of the bar and difficulty in dredging the bar to project depth, depths have consistently been less than the 26-foot project depth. The buoys marking the channel over the bar are non lateral and moved from time to time because of the shifting sands and changing channel. Dredging range lights are temporarily established at the entrance at times during dredging operations. The entrance buoys and the dredging range lights do not necessarily mark the best water. The major channels in the bay are marked by aids to navigation.
Willapa River flows into the E arm of the bay. Lights, buoys, daybeacons, and lighted and unlighted ranges mark the channel through the E arm and Willapa River to South Bend and Raymond.
Anchorage.–Anchorage with good holding ground may be had at almost any point inside the bay. The anchorage generally used is off Toke Point in 30 to 40 feet.
Dangers.–An underwater dike, 18 feet below the surface, extends 800 yards into the North Channel from a rock groin along the shore between Cape Shoalwater and North Cove in about 46°43'35"N., 124°03'30"W.
Currents.–In the entrance the current velocity is about 2.5 knots. Currents of 4 to 6 knots occur at times; the velocity is greatest on the ebb, particularly with S wind.
In the channel at South Bend, the velocity is about 1.2 knots on the flood and 1.4 knots on the ebb. (See Tidal Current Tables for predictions.)
South Bend is on the S bank of Willapa River, 8 miles above Toke Point. The principal industries are lumbering, oystering, and fishing; two canneries are operating here. Willapa Harbor Airport is on the N bank of the river about 2.5 miles NW of South Bend. **Raymond**, the principal town, is on the S bank of Willapa River at the junction of the South Fork, 3 miles above South Bend. There are sawmills here, and large quantities of lumber are shipped out.
Pilotage for Grays Harbor, discussed later in this chapter, also pertains to Willapa Bay.
Quarantine, customs, immigration, and agricultural quarantine.–(See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)
Quarantine is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1, for details.)
South Bend and Raymond are **customs ports of entry**.
Supplies.–Diesel oil, gasoline, water, ice, and some marine supplies are available in South Bend and Raymond. Both South Bend and Raymond have small-craft moorages operated by the respective towns.
North River, which enters the E arm 2 miles E of Toke Point, is navigated by small logging launches. The channel is marked by private daybeacons, and is navigable at high water to **Eatons Ranch**, 3 miles above the last daybeacon.
Palix River, on the E side of the bay, is navigable for small logging tugboats and fishermen for about 1 mile up each of the three forks above their junction. The fixed highway bridge, about 1 mile below the forks, has a clearance of 25 feet.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Seattle	Commander 13th CG District Seattle, WA	(206) 220-7001

Table of Selected Chart Notes

Corrected through NM Jul. 1/06
Corrected through LNM Jun. 20/06

Mercator Projection
Scale 1:40,000 at Lat. 46°34'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)
Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

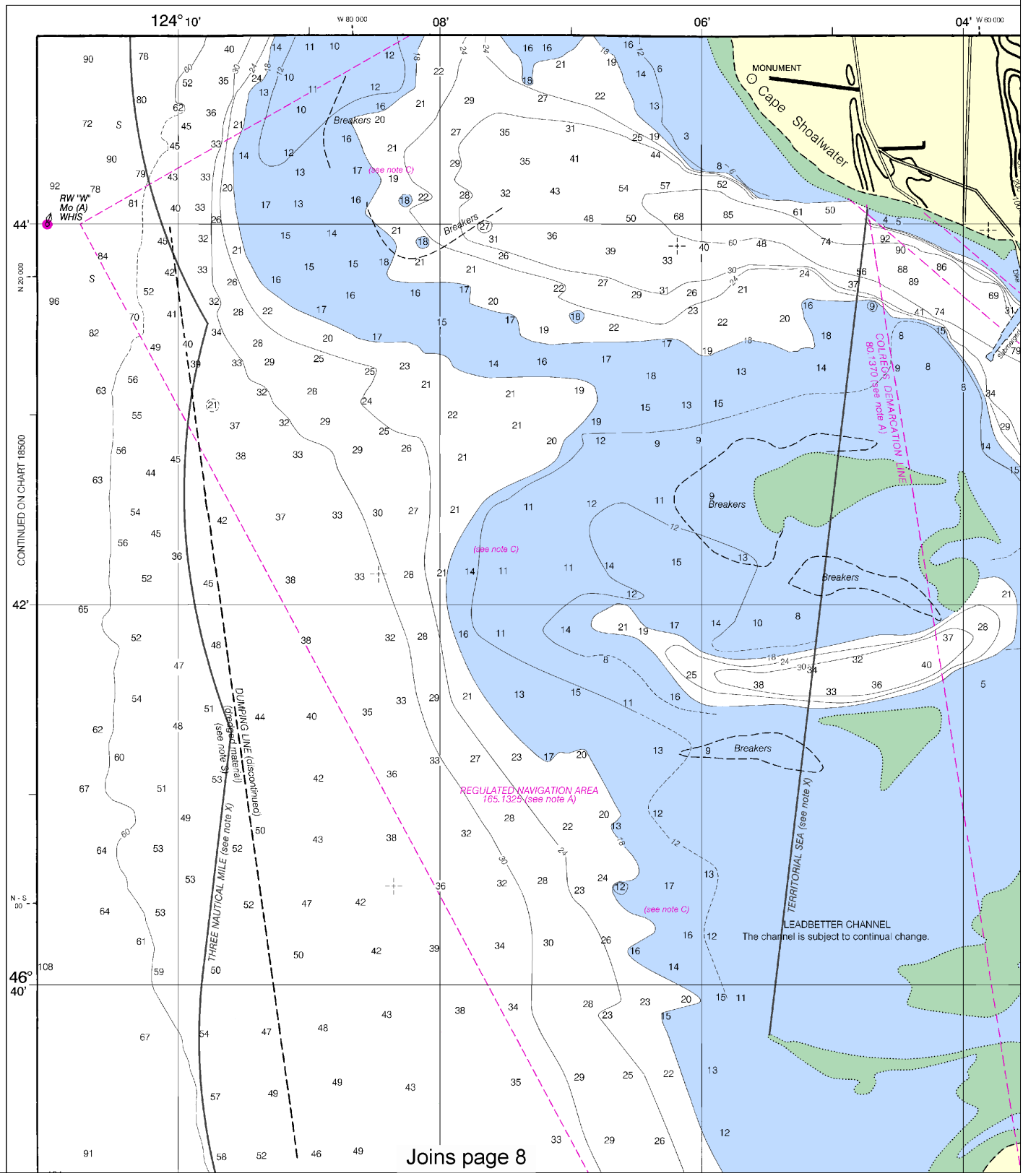
AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

21. Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.
Demarcation lines are shown thus: — — — —

SCALE 1:40,000
Nautical Miles
Yards
Meters

SOUNDINGS IN FEET

18504



Printed at reduced scale.

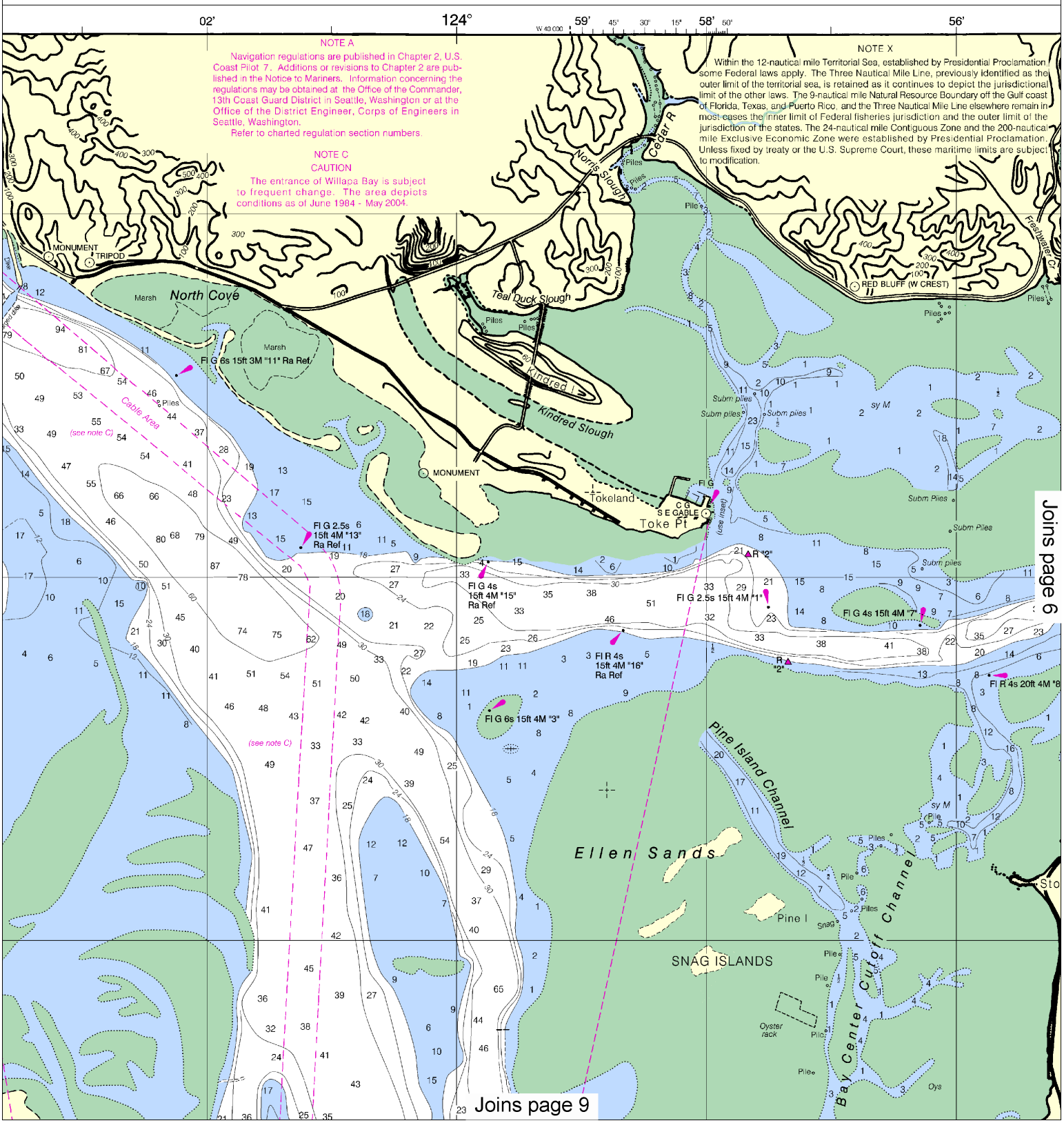
~~SCALE 1:40,000~~
Nautical Miles
Yards

See Note on page 5.

Note: Chart grid lines are aligned with true north.

PRINT-ON-DEMAND
NOAA and its partner, OceanGrafix, offer this chart upd
and critical corrections. Charts are printed when ordere
Editions are available 5-8 weeks before their release as t
about Print-on-Demand charts or contact NOAA at 1-
help@NauticalCharts.gov, or OceanGrafix at 1-87
help@OceanGrafix.com.

Formerly C&GS 6185, 1st Ed., Aug. 1891 C-1942-575 KAPP 1734

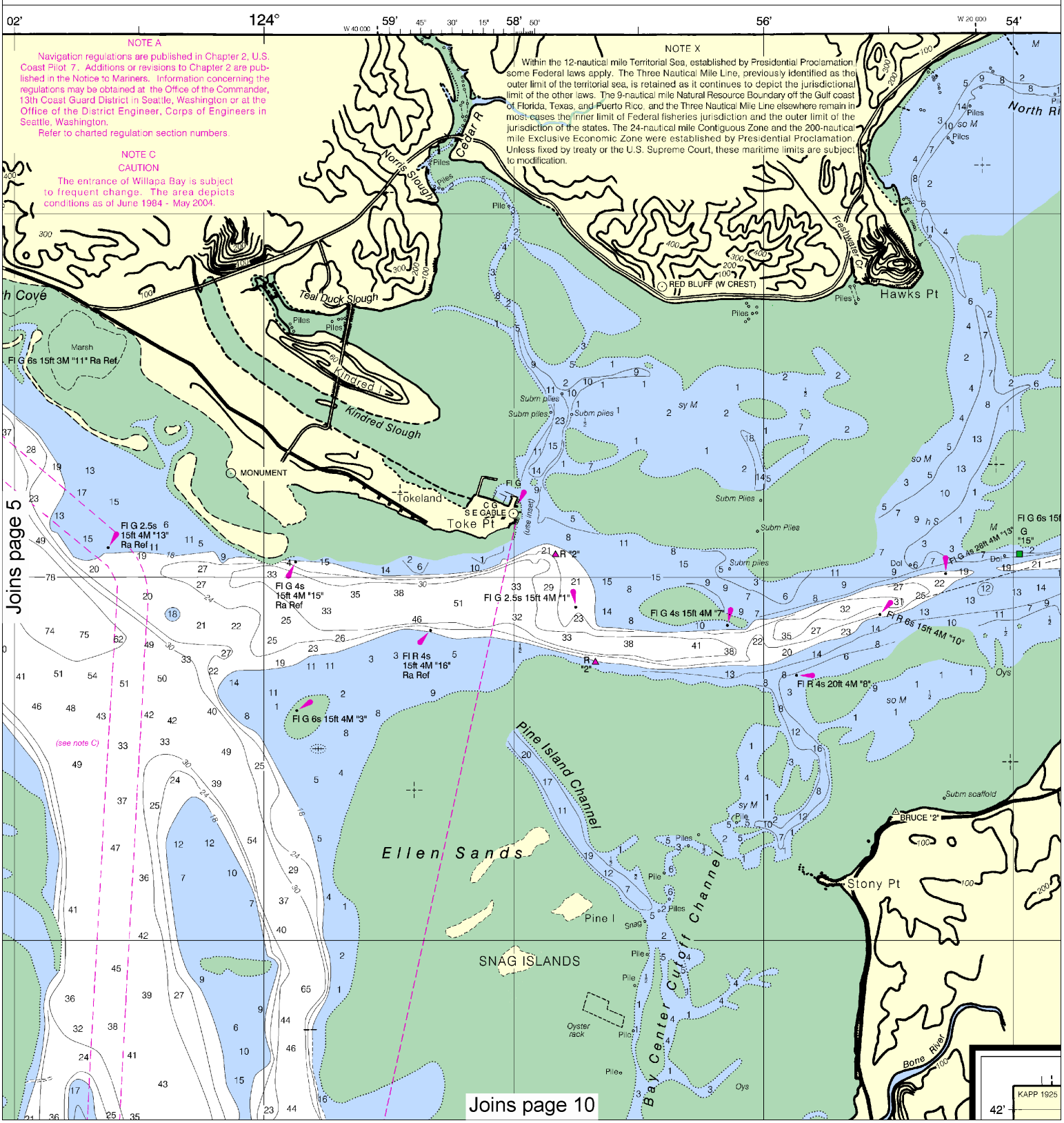


This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:53333. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.

PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, http://NauticalCharts.gov help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, http://OceanGrafix.com, or help@OceanGrafix.com.

Formerly C&GS 6185, 1st Ed., Aug. 1891 C-1942-575 KAPP 1734



6

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

~~SCALE 1:40,000~~

Nautical Miles

1 ½ 0 1 2 3

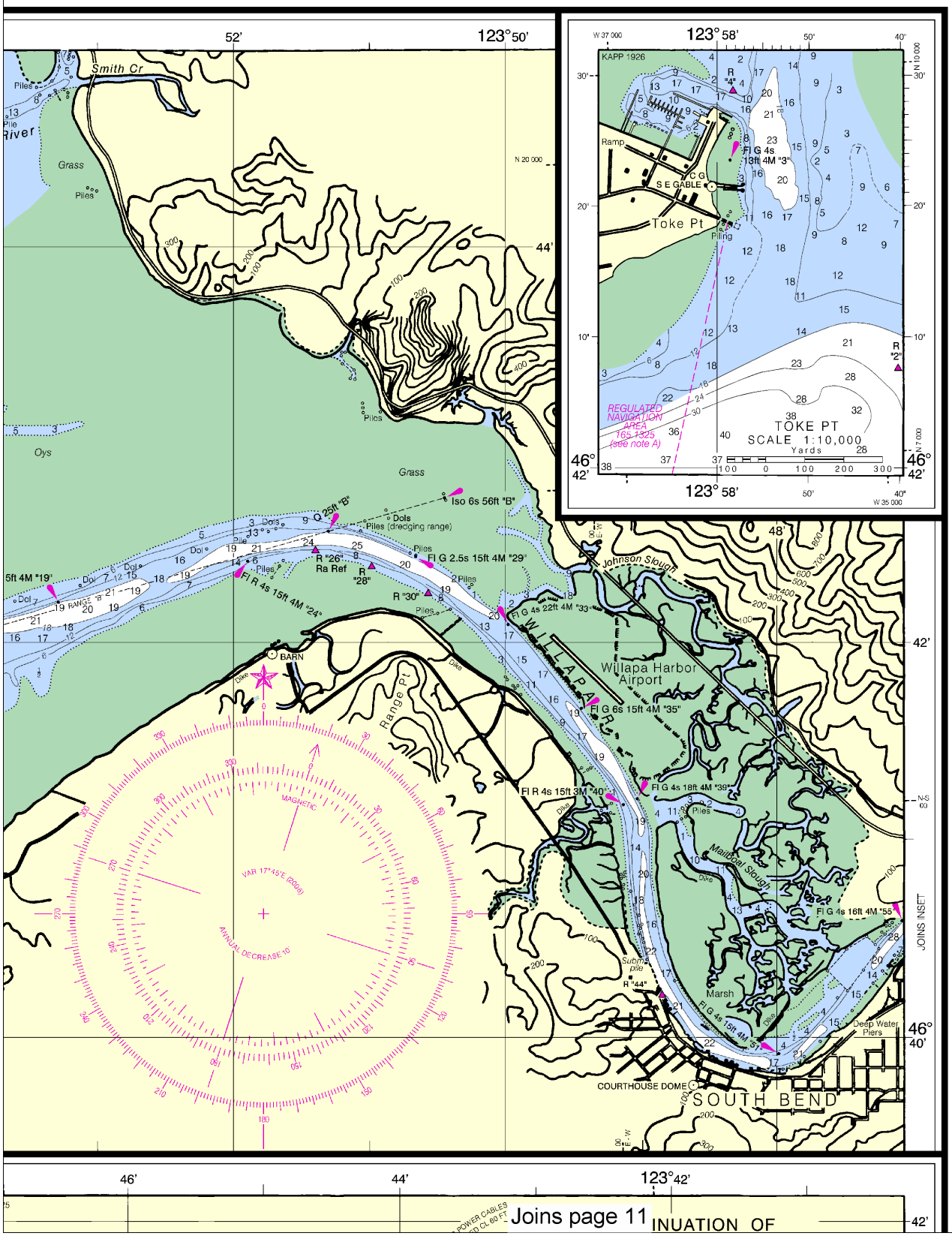
Yards

1000 0 1000 2000 3000 4000 5000

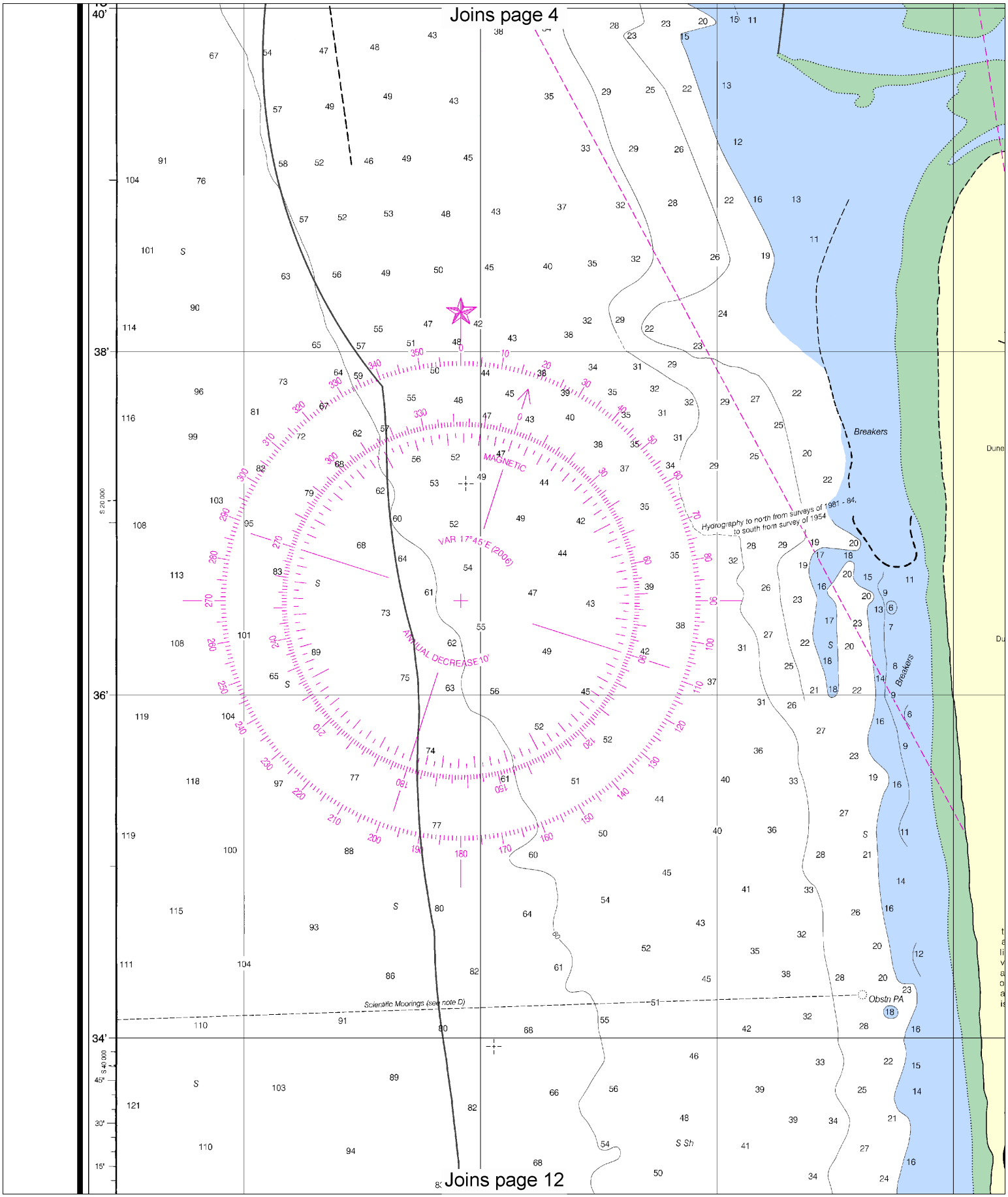
See Note on page 5.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

18504



This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 0513 1/29/2013,
NGA Weekly Notice to Mariners: 0713 2/16/2013,
Canadian Coast Guard Notice to Mariners: 1012 10/26/2012.



8

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:40,000~~

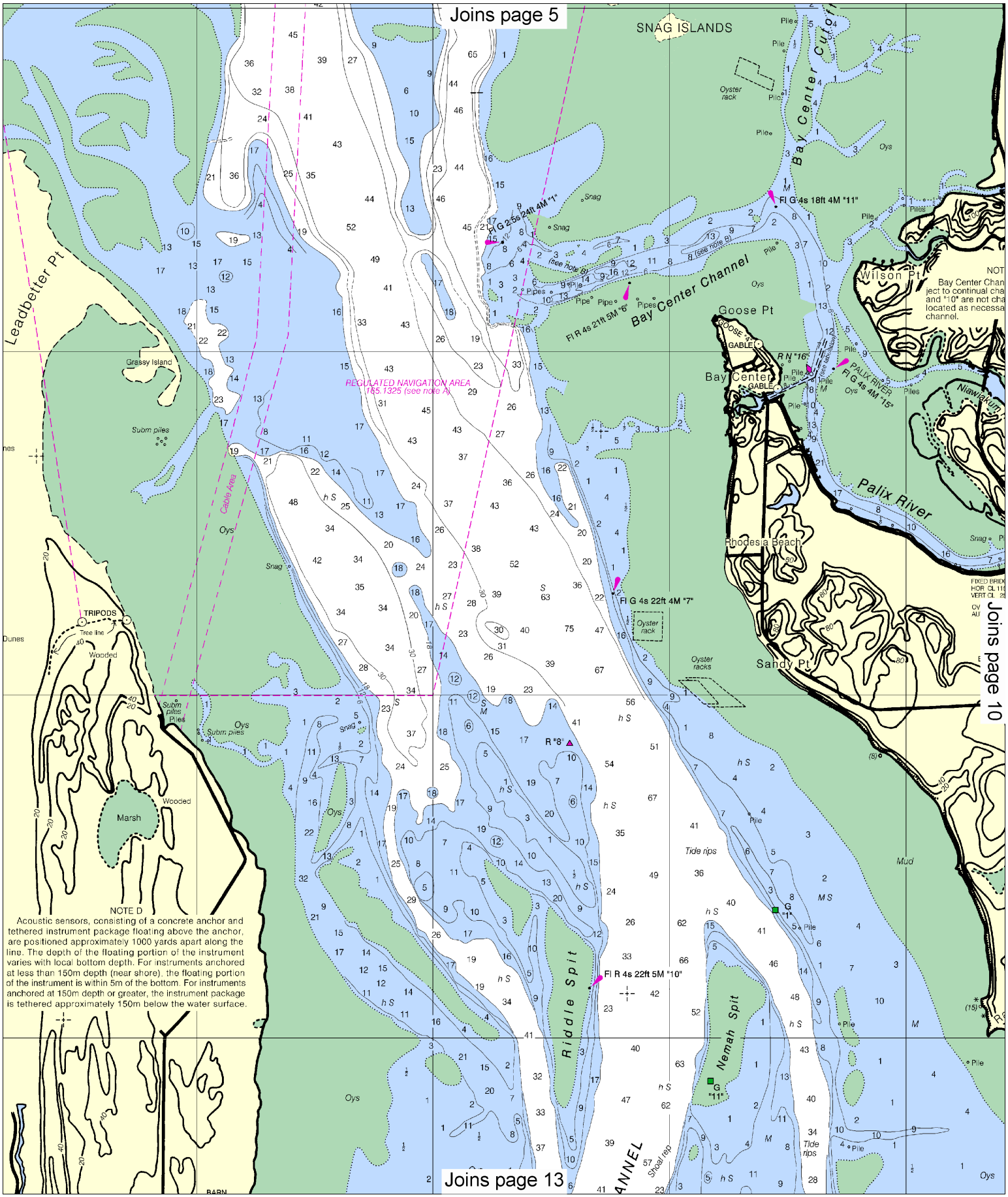
Nautical Miles

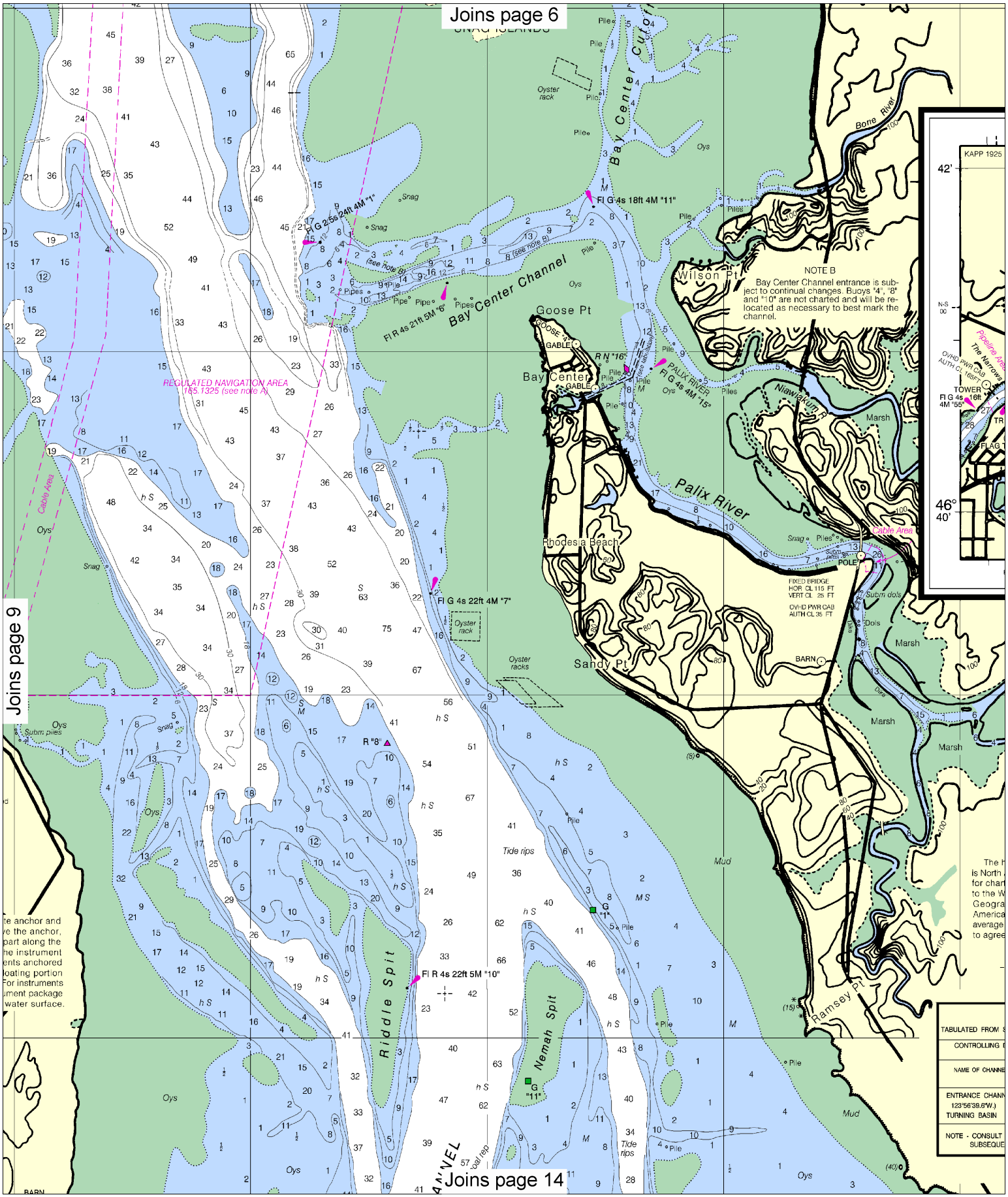
1 ½ 0 1 2 3

Yards

1000 0 1000 2000 3000 4000 5000

See Note on page 5.


Joins page 5
SNAG ISLANDS
Bay Center Cutoff
Fl G 4s 18ft 4M "11"
Fl G 2.5s 24ft 4M "1"
Bay Center Channel
Fl R 4s 21ft 5M "6"
Wilson Pt
Goose Pt
GOOSE GABLE
R N "16"
Bay Center GABLE
PALIX RIVER
Fl G 4s 4M "15"
Niawiakum
Palix River
Leadbetter Pt
Grassy Island
REGULATED NAVIGATION AREA
165.1325 (see note A)
Subm piles
Cable Area
Oys
Snag
TRIPODS
Tree line
Wooded
Dunes
Marsh
Rhodesia Beach
Fl G 4s 22ft 4M "7"
Oyster rack
Oyster racks
Sandy Pt
R "8"
Tide rips
Mud
Riddle Spit
Fl R 4s 22ft 5M "10"
Nemah Spit
G "11"
G "1"
Shoal rep
Tide rips
NOTE D
Acoustic sensors, consisting of a concrete anchor and tethered instrument package floating above the anchor, are positioned approximately 1000 yards apart along the line. The depth of the floating portion of the instrument varies with local bottom depth. For instruments anchored at less than 150m depth (near shore), the floating portion of the instrument is within 5m of the bottom. For instruments anchored at 150m depth or greater, the instrument package is tethered approximately 150m below the water surface.
BARN
Joins page 13
Joins page 10



10

Note: Chart grid lines are aligned with true north.

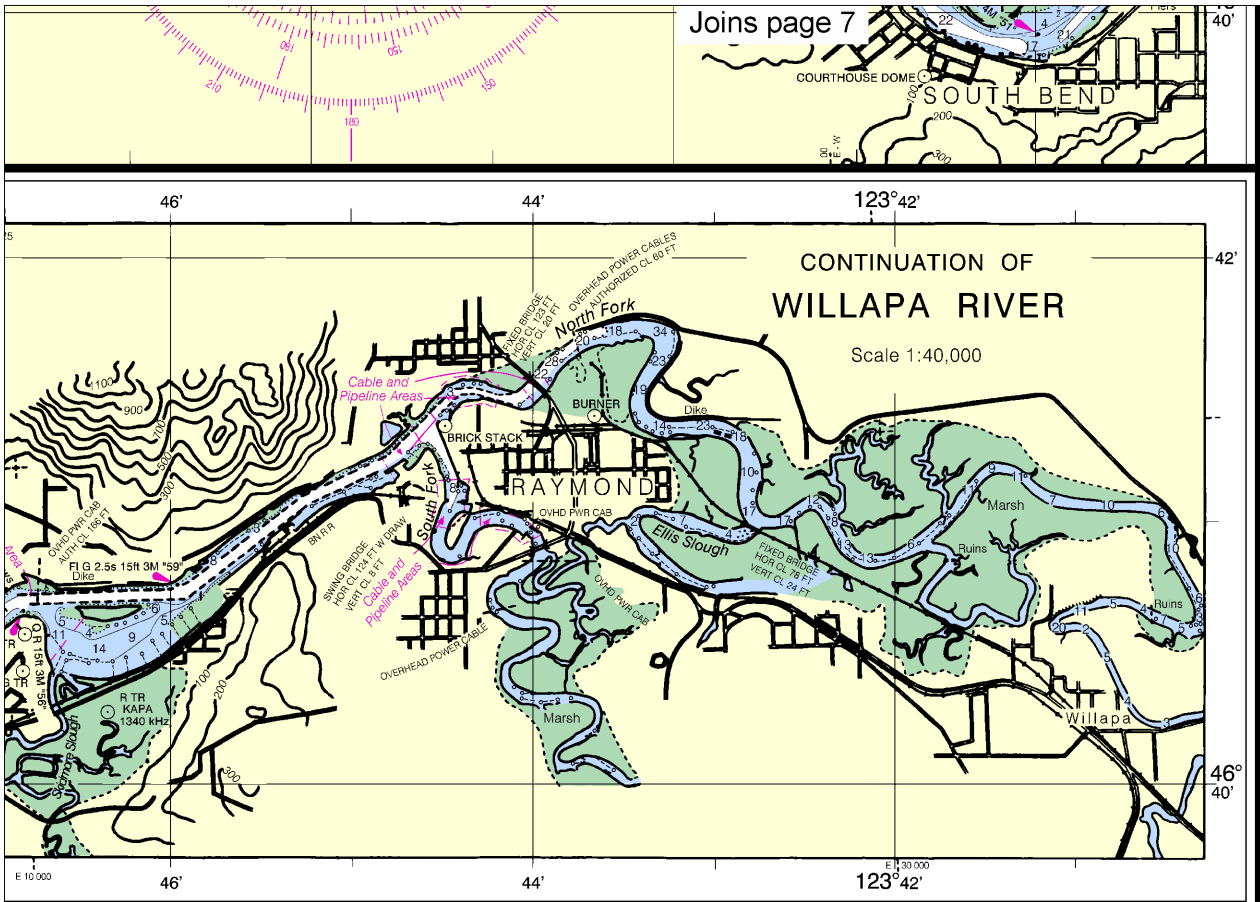
Printed at reduced scale. ~~SCALE 1:40,000~~

Nautical Miles: 1 ½ 0 1 2 3

Yards: 1000 0 1000 2000 3000 4000 5000

See Note on page 5.

Joins page 7



HORIZONTAL DATUM

e horizontal reference datum of this chart
h American Datum of 1983 (NAD 83), which
arting purposes is considered equivalent
World Geodetic System 1984 (WGS 84).
raphic positions referred to the North
can Datum of 1927 must be corrected an
ge of 0.644" southward and 4.590" westward
ee with this chart.

WILLAPA RIVER CHANNEL DEPTHS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUN 2004

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)					PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLLW (FEET)
LIGHT 56 TO NORTH FORK	A10.1	12.4	14.1	1,2-86;6-04	300-250	2.1	24
NORTH FORK TO 700 FEET BELOW HIGHWAY BRIDGE	B10.1	14.7	4.2	8-55;3-83	200-150	0.4	24
SOUTH FORK TO 500 FEET NORTH OF N.P. RY. BRIDGE	13.1	5.2	4.0	1,2-86	150	0.3	24

A. SHOALING TO 6.4 FEET AT 46°40'44.3" N 123°46'02.7" W.
B. THE CHANNEL HAS SHOALED ALONG THE EDGE; A DEPTH OF 16.1 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Additional information can be obtained at nauticalcharts.noaa.gov.

BAY CENTER CHANNEL

SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO SEP 2002

DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)

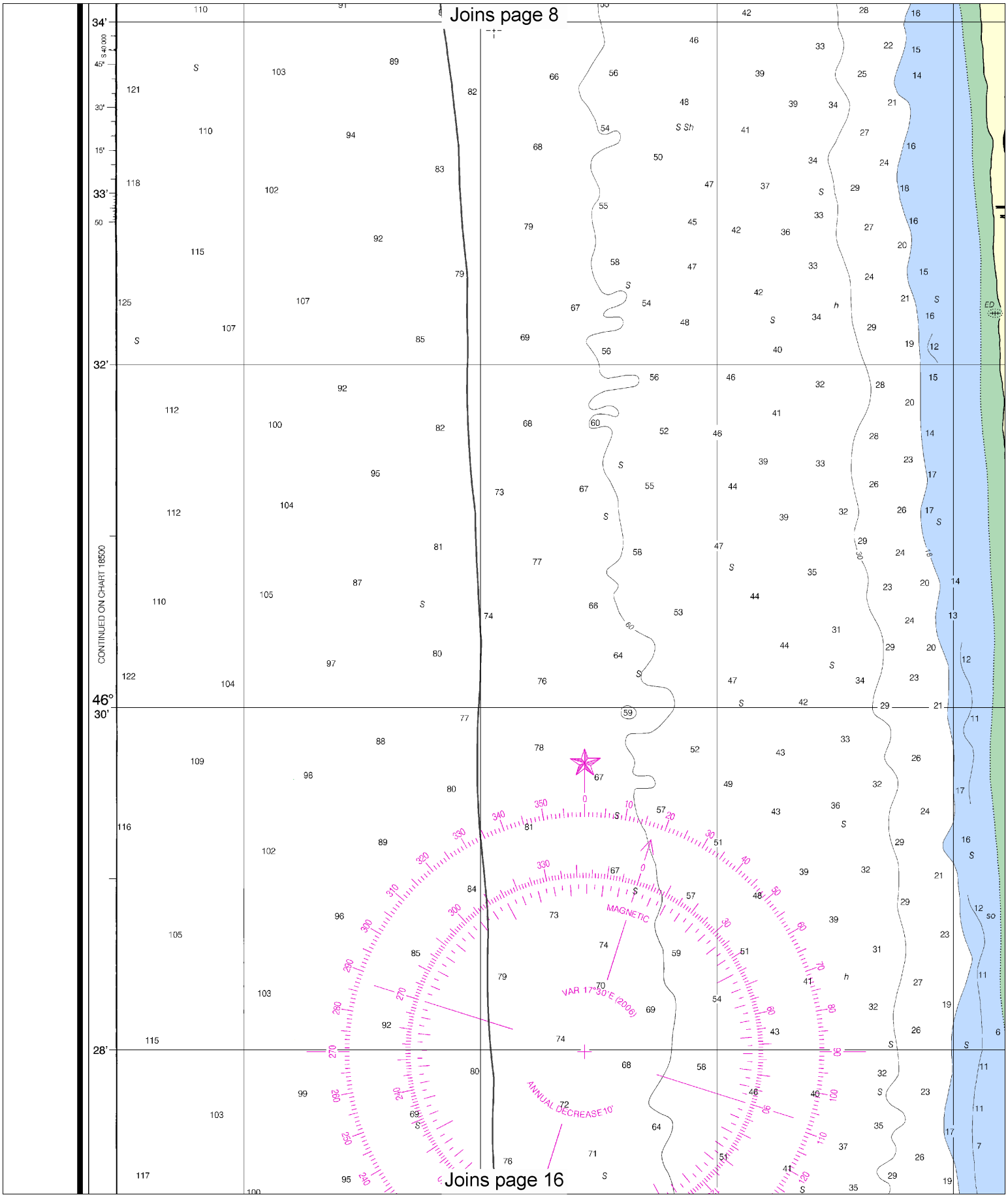
NEL	DEPTH MLLW (FEET)	WIDTH (FEET)	DATE OF SURVEY
NNEL (46°38'04.4"N.	9.4 7.6	40 40-105	7-02 9-02

LT THE CORPS OF ENGINEERS FOR CHANGING CONDITIONS
UENT TO THE ABOVE

NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION U.S. DEPARTMENT OF COMMERCE
COAST SURVEY

UNITED STATES - WEST COAST

WASHINJoins page 15



12

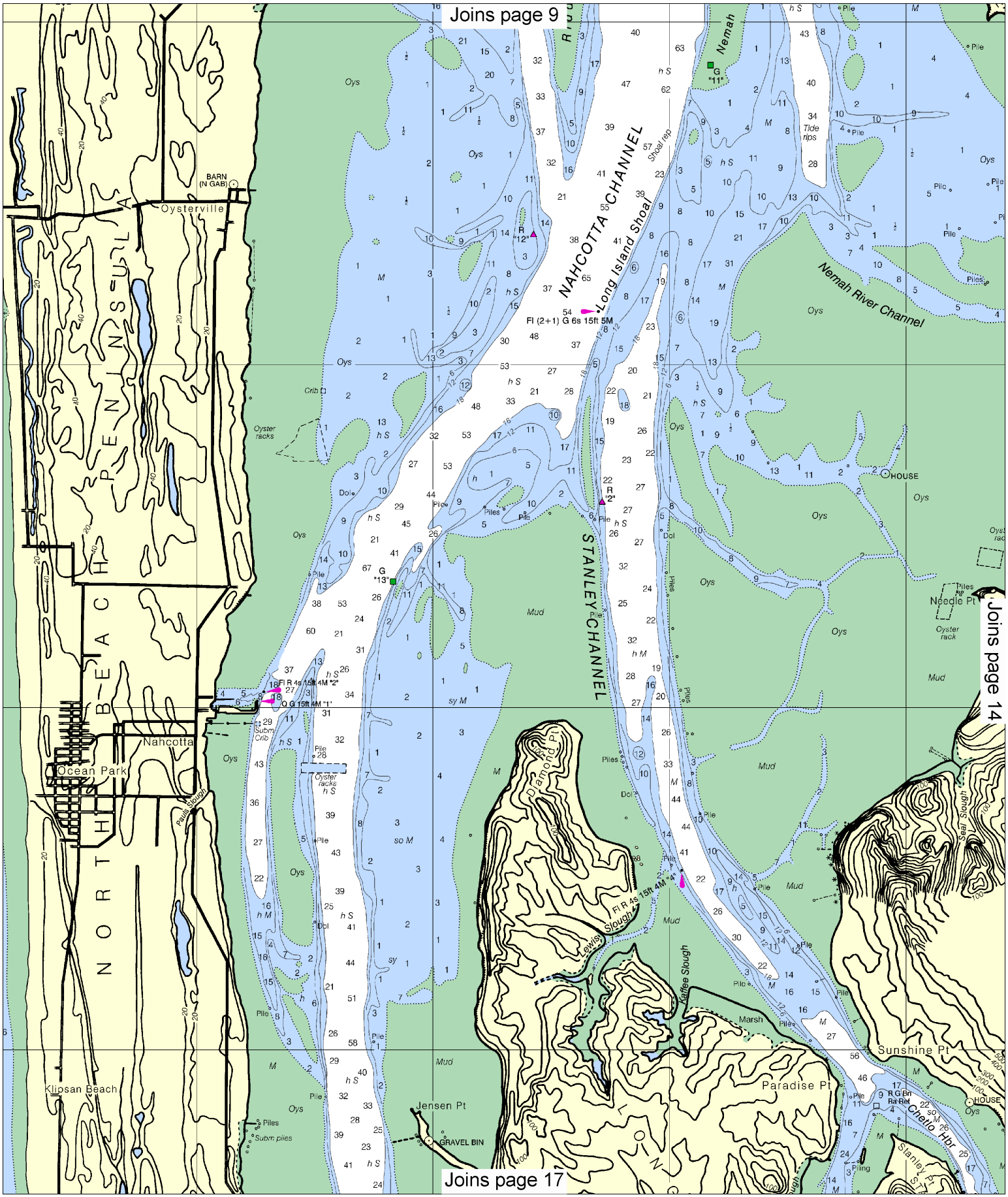
Note: Chart grid lines are aligned with true north.

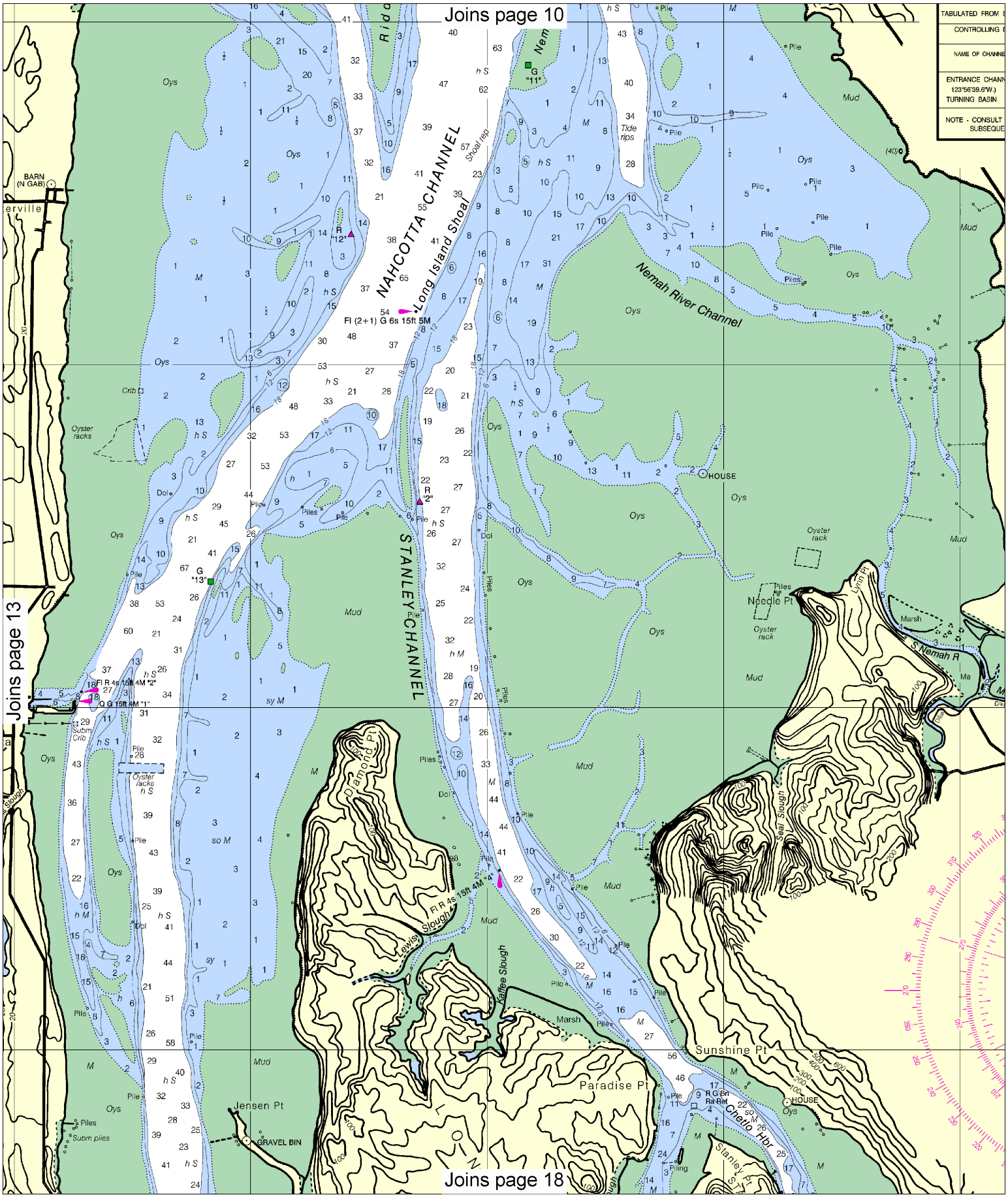
Printed at reduced scale. ~~SCALE 1:40,000~~

Nautical Miles: 1 ½ 0 1 2 3

Yards: 1000 0 1000 2000 3000 4000 5000

See Note on page 5.


Joins page 9
Joins page 14
Joins page 17
NAHCOTTA CHANNEL
STANLEY CHANNEL
Long Island Shoal
Nemah River Channel
Nemah
Tide rips
Shoal rep
Fl (2+1) G 6s 15ft 5M
Fl R 4s 15ft 4M "2"
Q G 15ft 4M "1"
Fl R 4s 15ft 4M "4"
G "11"
R "12"
G "13"
R "14"
BARN (N GAB)
Oysterville
NORTH BEACH PENINSULA
Nahcotta
Ocean Park
Klipsan Beach
Jensen Pt
GRAVEL BIN
Diamond Pt
Needle Pt
Sunshine Pt
Paradise Pt
Marsh
Mud
Oys
Oyster racks
Subm Crib
Subm piles
Piles
Pile
HOUSE
Chatto Hbr
Stanley Pt
Lewis Slough
Karlee Slough
Palix Slough
Seal Slough



14

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:40,000~~

Nautical Miles: 1 ½ 0 1 2 3

Yards: 1000 0 1000 2000 3000 4000 5000

See Note on page 5.

SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO SEP 2002			
DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)			
NEL	DEPTH MLLW (FEET)	WIDTH (FEET)	DATE OF SURVEY
NNEL (46°38'04.4"N.	9.4 7.6	40 40-105	7-02 9-02
LT THE CORPS OF ENGINEERS FOR CHANGING CONDITIONS UENT TO THE ABOVE			

Joins page 11

COAST SURVEY

UNITED STATES - WEST COAST

WASHINGTON

WILLAPA BAY

Mercator Projection
Scale 1:40,000 at Lat. 46°34'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

TIDAL INFORMATION

Place Name	(LAT/LONG)	Height referred to datum of soundings (MLLW) Mean Higher High Water	Mean High Water	Mean Low Water	Extreme Low Water
		feet	feet	feet	feet
Nahcotta	(46°30'N/124°02'W)	10.0	9.3	1.4	-4.0
Toke Point	(46°43'N/123°58'W)	8.9	8.2	1.4	----
Raymond	(46°41'N/123°45'W)	10.0	9.3	1.4	----
Long Island	(46°28'N/123°57'W)	10.2	9.4	1.4	----
Naselle River	(46°23'N/123°50'W)	10.8	10.0	1.3	----
Bay Center	(46°37'N/123°57'W)	9.2	8.5	1.4	----
South Bend	(46°40'N/123°48'W)	9.8	9.1	1.4	----

(Jun 2006)

PLANE COORDINATE GRID

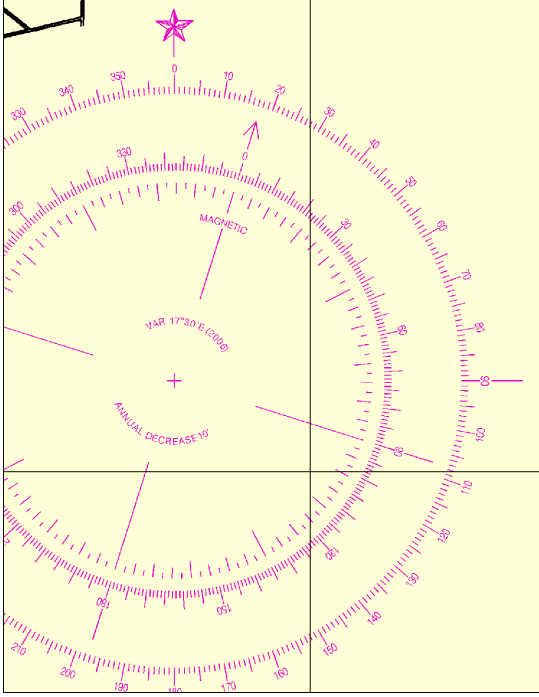
Local grid system, U.S. Corps of Engineers, is indicated by dashed tick marks at 20,000 foot intervals.

SCALE 1:40,000

Nautical Miles
1 ½ 0 1 2 3

Yards
1000 0 1000 2000 3000 4000 5000

Meters
1000 0 1000 2000 3000 4000 5000



ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)
Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

21 Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.
Demarcation lines are shown thus. – – – –

HEIGHTS

Heights in feet above Mean High Water.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, and U.S. Coast Guard.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

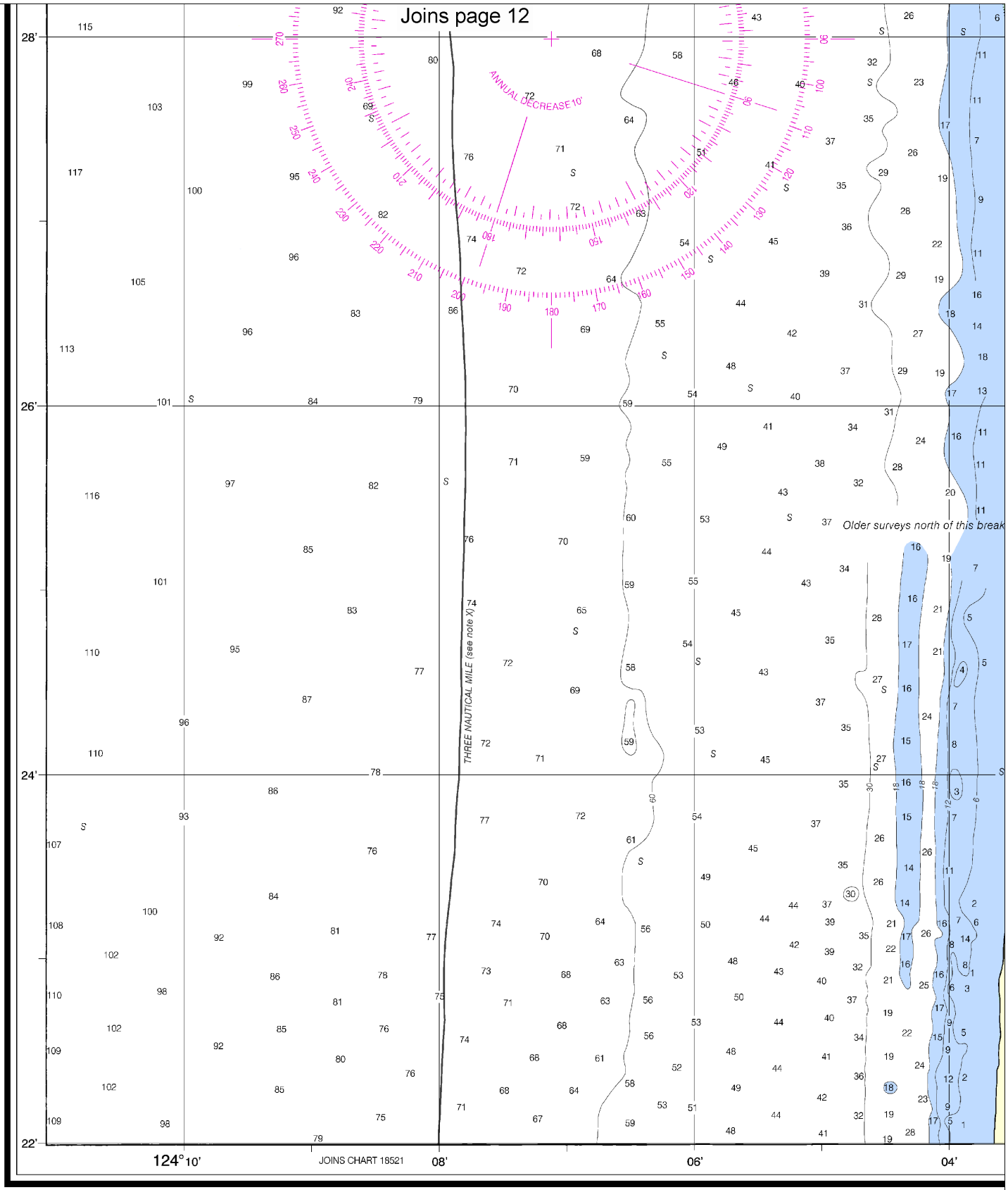
CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Joins page 19 or defects in aids to ted on this chart. See

34'
45'
30
15'
33'
50'
32'
46°
30'
28'



66th Ed., Jul. / 06 ■
Corrected through NM Jul. 1/06
Corrected through LNM Jun. 20/06

18504

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

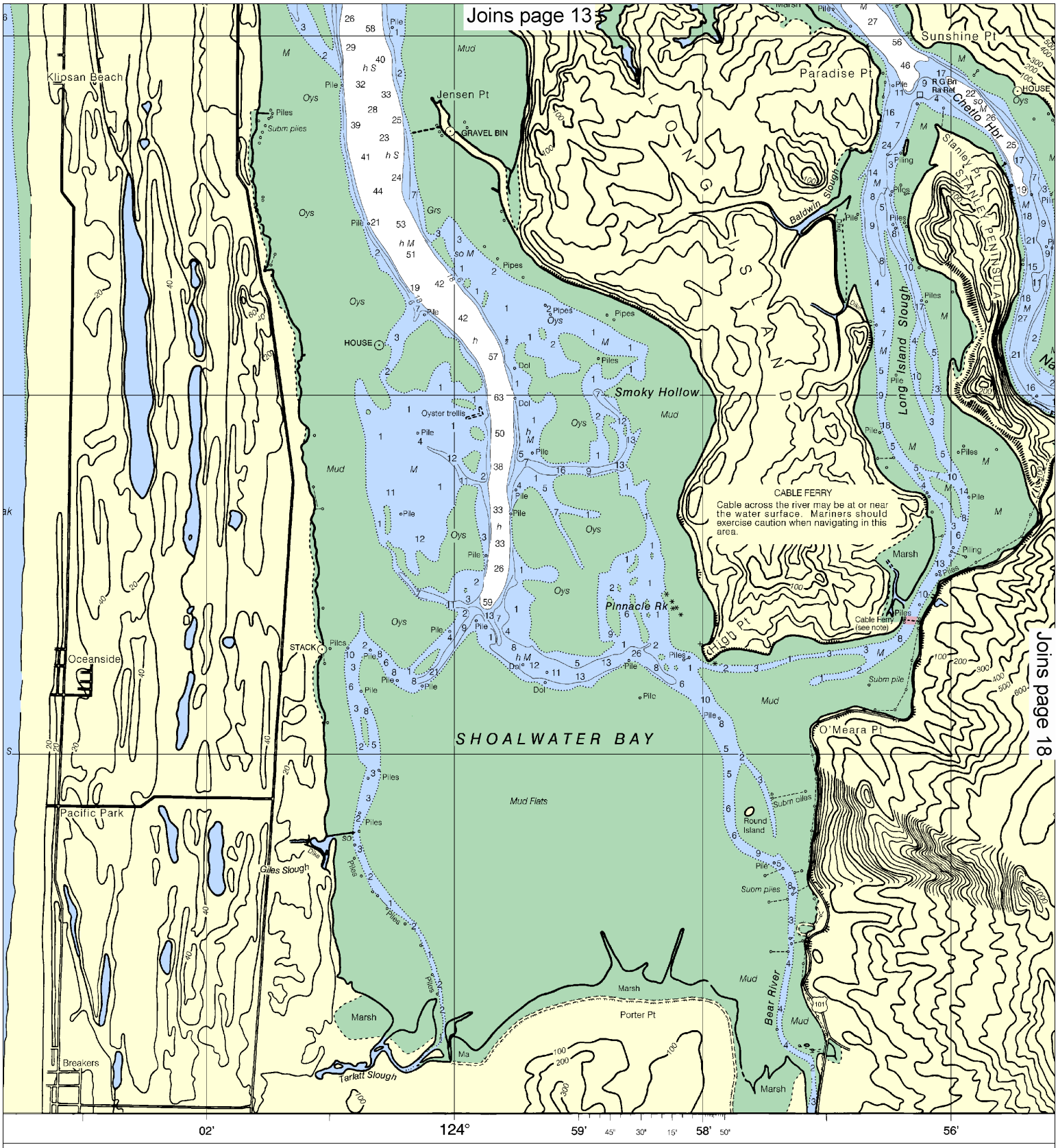
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:40,000~~

Nautical Miles: 1 ½ 0 1 2 3

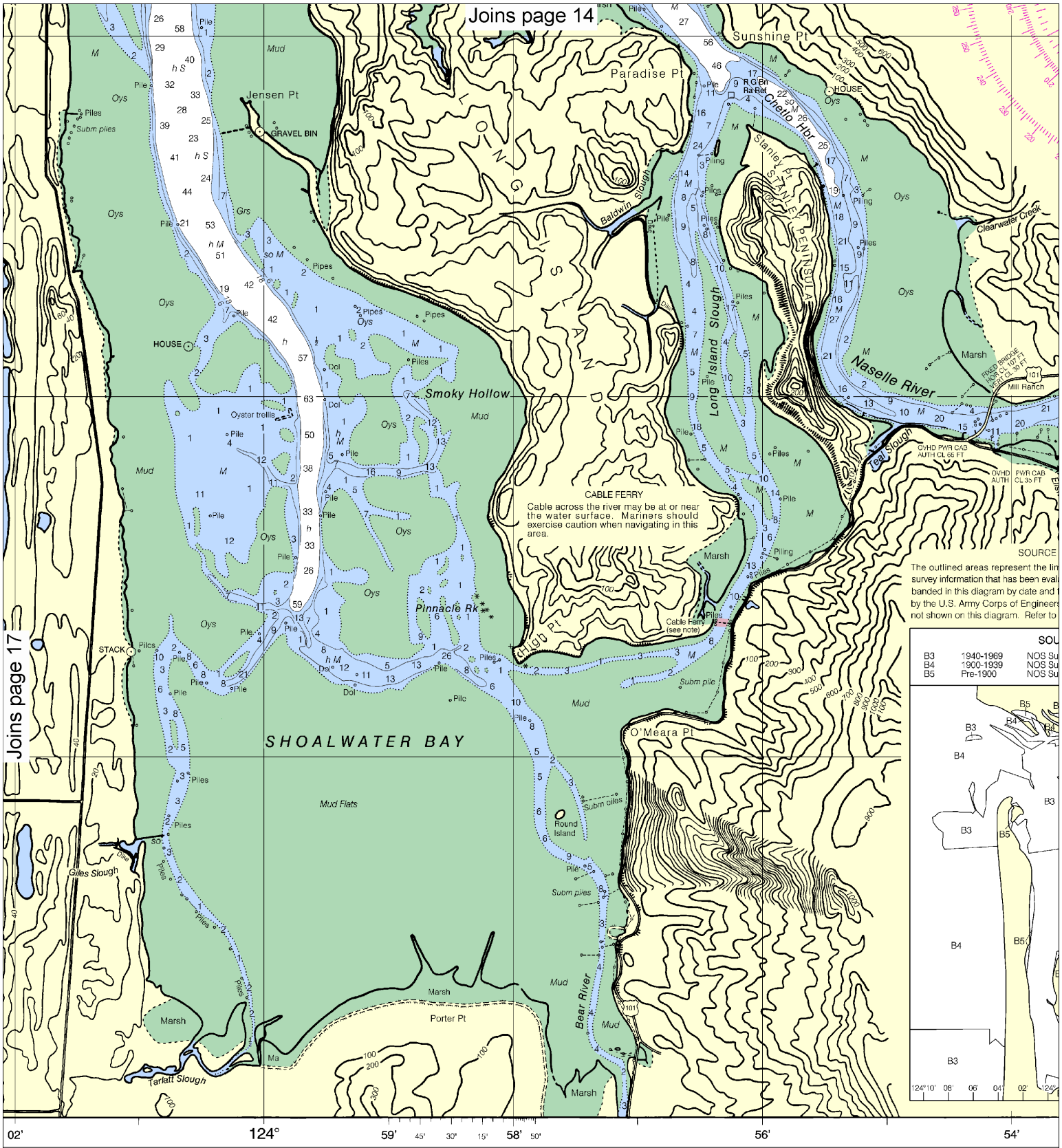
Yards: 1000 0 1000 2000 3000 4000 5000

See Note on page 5.



SOUNDINGS IN FEET

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY



GS IN FEET

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

FATHOMS 1 2 3 4 5
FEET 6 12 18 24 30 3
METERS 1 2 3 4 5 6 7 8 9 10

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:40,000~~

Nautical Miles
1 ½ 0 1 2 3

Yards
1000 0 1000 2000 3000 4000 5000

See Note on page 5.

Joins page 15

he National Ocean Service, Coast
he Corps of Engineers, and U.S.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

LOGARITHMIC SPEED SCALE

1 2 3 4 5 6 7 8 9 10 15 20 25 30 40 50 60

To find SPEED, place one point of dividers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place right point on 60 and left point will then indicate speed in units per hour. Example: with 4.0 nautical miles run in 15 minutes, the speed is 16.0 knots.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
⊙(Accurate location) o(Approximate location)

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area *Cable Area*

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

Covered wells may be marked by lighted or unlighted buoys.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Astoria, OR	KEC-91	162.40 MHz
Astoria, OR	WWF-94	162.425 MHz
Olympia, WA	WXM-62	162.475 MHz

NOTE S

Regulations for Ocean Dumping Sites are contained in 40 CFR, Parts 220-229. Additional information concerning the regulations and requirements for use of the sites may be obtained from the Environmental Protection Agency (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices. Dumping subsequent to the survey dates may have reduced the depths shown.

OVERHEAD POWER CABLES

Roaring Creek Slough
OVERHEAD POWER CABLE AUTHORIZED CL 75 FT
Marsh
Ellsworth Slough
Smith Cr
Piles
OVERHEAD POWER CABLE AUTHORIZED CL 60 FT
OVHD PWR CAB AUTH CL 60 FT
Dike
Pile

E DIAGRAM
limits of the most recent hydrographic
aluated for charting. Surveys have been
d type of survey. Channels maintained
ers are periodically resurveyed and are
o Chapter 1, United States Coast Pilot.

OURCE
Surveys partial bottom coverage
Surveys partial bottom coverage
Surveys partial bottom coverage

28' 26' 24' 22'
52' 123°50' 48'

Willapa Bay
SOUNDINGS IN FEET - SCALE 1:40,000

18504

ED. NO. 66
NSN 7642014011572 NGA REFERENCE NO. 18BHA18504

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

All Hazards NOAA Weather Radio NOAA's National Weather Service

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

Quick References

Nautical chart related products and information	—	**http://www.nauticalcharts.noaa.gov**
Online chart viewer	—	**http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html**
Report a chart discrepancy	—	**http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx**
Chart and chart related inquiries and comments	—	**http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs**
Chart updates (LNM and NM corrections)	—	**http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html**
Coast Pilot online	—	**http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm**
Tides and Currents	—	**http://tidesandcurrents.noaa.gov**
Marine Forecasts	—	**http://www.nws.noaa.gov/om/marine/home.htm**
National Data Buoy Center	—	**http://www.ndbc.noaa.gov/**
NowCoast web portal for coastal conditions	—	**http://www.nowcoast.noaa.gov/**
National Weather Service	—	**http://www.weather.gov/**
National Hurrican Center	—	**http://www.nhc.noaa.gov/**
Pacific Tsunami Warning Center	—	**http://ptwc.weather.gov/**
Contact Us	—	**http://www.nauticalcharts.noaa.gov/staff/contact.htm**

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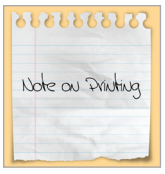

This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

NOAA's Office of Coast Survey The Nation's Chartmaker